

Remarks

In the final Office action, claims 1-3, and 7-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,936,811 to Baker ("Baker") in view of U.S. Patent No. 6,672,596 to Devers ("Devers"). Claim 6 was deemed to be allowable if rewritten in independent form.

In this response, no amendments are made. Claims 1-11 continue to be pending. Reconsideration and withdrawal of the rejections is requested in view of the following remarks.

Rejections under 35 U.S.C. § 103:

Claims 1-3 and 7-12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Baker in view of Devers.

As discussed in detail in the last response, Devers describes a seal adaptor assembly 40 that includes an annular body 41 having an inner surface 42 that conforms to the outer surface 36 of a universal joint housing 12. A plurality of inserts 44, made of a more rigid material than the annular body, fit into specially designed pockets 43 formed by wall segments 42a-f.

Baker, on the other hand, describes three segmented band segments fitting on the outside of the boot, that are ultrasonically spot welded to the sleeve 15 of the boot 12 and secured into position by a low-profile clamp. The bands segments fit together in a tongue and groove design that allows circumferential movement to isolate the clamp from excessive loads applied to the clamp by movement of the joint. Column 4, lines 27-40.

Independent claim recites an axle boot for joint sealing that, among other features, includes:

a plurality of compensating pieces connected to one another by a plurality of ring sections to form a single piece component surrounding an outer circumference of the connecting collar, the single piece component having a cylindrical outer circumferential surface, wherein at least one of the ring sections is elastically deformable sufficient to enable the single piece component to expand to a circumference larger than the outer circumference of the connecting collar.

Applicants respectfully submit that there is no motivation to selectively combine the features of Baker and Devers to arrive at the claimed feature, and that doing so now constitutes improper hindsight reconstruction. Furthermore, Applicants respectfully submit that even combining the features in the selective manner suggested -- though improper -- would still not

provide a suggestion for each of the features recited in claim 1, and would in fact result in a non-workable combination.

As a motivation to combine the references, the Examiner asserts that “it would have been obvious to modify the compensating components of Baker with the component taught by Devers to provide a more uniform sealing and clamping force.” However, according to Devers itself, the advantage of uniformity of sealing is achieved, not by any teaching relating to sufficient circumferential expandability, but rather by the use of two different types of materials: rigid inserts 44 placed inside of specially designed pockets 43 made of a more pliable material. Column 1, lines 57-62. Furthermore, the placement of the Devers seal adapter between the boot seal and the housing results in specific design parameters not present when the seal adapter is mounted outside of the boot. For example, because the interior of the boot is full of lubricant, two sealing interfaces (housing/adapter and adapter/boot) are created when the seal adapter is between the boot and the housing, while only one sealing interface exists when the arrangement is reversed. Devers specifically ties the uniformity of sealing and clamping forces as being contingent upon the boot being disposed on the outside of the seal adapter assembly 40. The Devers invention “will result in a more uniform compression of the seal adaptor which will provide a more uniform sealing/clamping force *between the seal adaptor assembly and the boot seal and between the seal adaptor and the housing.*” Column 1, lines 47 to 52.

The Devers seal adapter assembly is specifically designed for placement between the boot seal and the housing, having sealing surfaces on both the inner and outer circumferential walls, so as to result in such uniformity of compression between the boot and the housing, and “for holding the resilient seal member (i.e. boot) on the seal adapter assembly.” Column 1, lines 63-67. In fact, the stated object of the Devers invention is “to provide such a reinforced seal adapter seal adapter assembly for providing nearly uniform compression *between the clamped seal boot and a universal joint housing member*”. Column 2, lines 1-6. the fact that

Thus, not only is a reversal of the positioning of the seal adaptor relative to the boot seal not suggested by Devers, but the very advantages and objects articulated in Devers adapter depend upon positioning of the adapter between the boot and the housing. Such a reversal of positioning would frustrate the entire purpose of Devers and result in an unworkable embodiment.

Baker, likewise, specifically enumerates the disadvantages of placing the seal adapter

disposed between the seal and the housing, see, e.g. column 2, lines 22-35, further teaching a person of ordinary skill in the art away from combining features from Devers into the Baker device.

Finally, even using hindsight reconstruction to select features from Devers and Baker -- though improper -- still does not provide a suggestion for the feature of a ring section being elastically deformable sufficient to enable the single piece component to expand to a circumference larger than the outer circumference of the connecting collar. It is one thing to suggest sufficient pliability to be pulled over the edge of a rigid housing member, and quite another to suggest additional flexibility sufficient to insert a flexible member like the flexible Baker sleeve 15 between the ring and the rigid housing element.

For at least the above reasons, therefore, withdrawal of the rejection to claims 9 and 10 under 35 U.S.C. § 103 is respectfully requested.

CONCLUSION

For at least the reasons stated above, Applicant requests withdrawal of the rejections. It is respectfully submitted that the application is now in condition for allowance. Should the Examiner feel that an interview would advance prosecution of the present application, the Examiner is invited to contact the undersigned.

Respectfully submitted,

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